

## **The Invention**

The invention relates to a corrosion inhibiting composition for use in inhibiting the corrosion of metallic surfaces exposed to water comprising a mixture of a fatty acid ester of a sorbitan ester of a saturated fatty acid and a polyethylene glycol ester. These compositions are useful in inhibiting the corrosion of metals such as steel, copper, and brass, which are exposed to water or other industrial fluids.

The claims have been narrowed to further specify the fatty acid ester of a sorbitan ester of a saturated fatty acid, and a polyethylene glycol ester, because the Examiner contends that the prior claims were commensurate with the scope of the data in the examples.

### **Support for language in amended claims**

Support for "a sorbitan ester of a fatty acid having from 16 to 18 carbon atoms", now found in amended claim 1, can be found in the specification at page 4, paragraph 2.

## **DISCUSSION OF EXAMINER'S OFFICE ACTION**

### **Claim Rejections - 35 USC § 112**

The following is a quotation of the first paragraph of 35 U.S.C. 112:

The specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the same and shall set forth the best mode contemplated by the inventor of carrying out his invention.

**Claims 1-10 are rejected under 35 U.S.C. 112, first paragraph, as failing to comply with the written description requirement.**

The claim(s) contains subject matter, which was not described in the specification in such a way as to reasonably convey to one skilled in the relevant art that the inventor(s), at the time the application was filed, had possession of the claimed invention. The newly added limitation "(a) a fatty acid ester of a sorbitan ester and a saturated fatty acid" is considered as new matter because it is in conflict with the disclosure set forth at page 4, lines 2-3 of paragraph 2 that the (a) a fatty acid ester of a sorbitan ester of a saturated fatty acid". The rejection may be overcome with the substitution of the term "of" for the term "and" in the said newly added phrase.

### **Applicants' response**

Claim 1 was amended to overcome this rejection.

The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter, which the applicant regards as his invention.

**Claims 4-10 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.**

The "about" term before "1:1" and before "1:4" is indefinite and confusing because it lacks support for the phrase "1:1 to 1:10" found in line 4 of claim 1 that does not contain the term "about". The adding of the term "about" before 1:1 in claim 4 makes the term broader than the term "about" in claim 1. Clarification is requested in terms of the scope of the claims. The rejection may be overcome with the deletion of the term "about" in claim 4 for the insertion of the term about in claim 4.

### **Applicants' response**

Claim 4 was amended to correct this mistake.

### **Claim Rejections - 35 USC § 103 (a)**

The following is a quotation of 35 U.S.C. 103(a), which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

**Claims 1-10 are rejected under 35 U.S.C. 103(a) as being unpatentable over Burlew 6,042,750 in view of Admitted Prior Art.**

Burlew teaches a corrosion composition and a method for inhibiting corrosion on metallic surfaces wherein said composition comprises (a) polyoxyethylene fatty acid esters, (b) polyethylene glycol esters, and other additives. note example 1, claim 1, column 1, lines 4-8, column 1, line 65 to column 2, lines 1-14, column 2, line 55 to column 2, lines 1-5, column 3, lines 30-37 and column 4, lines 15-37.

Burlew is silent to teachings to the (a) fatty acid ester of a sorbitan ester of a saturated fatty acid. Applicants make admission on record at page 2-second full paragraph of the instant specification that prior art US 5,849,220 of Batton teaches a combination of (1) sorbitan fatty acid ester and (2) polyoxyethylene derivative of a fatty acid ester. A closer reading of Batton 5,849,220 teaches a corrosion inhibitor composition and method of inhibiting corrosion of metallic surfaces wherein the industrial fluid system is selected from the group consisting of cooling water systems; refinery systems; pulp and paper making systems; food and beverage systems; and, mechanical coolant systems. column 7,

lines 56-65. Batton further teaches a corrosion inhibitor comprising the (1) fatty acid ester of a sorbitan ester of a saturated fatty acid, column 6, lines 16-21, that is the (a) sorbitan ester of the instant applicant providing the motivation for adding the said sorbitan fatty acid ester to the composition and method of Burlew with the reasonable expectation to provide the corrosion inhibition properties to the said composition and method rendering the instant claims obvious. The polyethylene fatty acid esters of Batton are the same (a) ester of Burlew.

The instant claims contain the open ended language "comprising" and would not exclude the "polyoxyethylene fatty acid esters and other components of Burlew. It is further noted that the claims as drafted are not commensurate in scope with the experimental data and results presented in Tables I-IV on pages 6-9 of the instant application. The instant claims are much broader in scope than the experimental results and data presented on record.

### **Applicants' Response**

The Examiner agrees that Burlew does not teach or suggest a composition containing a fatty acid ester of a sorbitan ester of a saturated fatty acid. However, the Examiner points out that Burlew's compositions, among other components, contain at least one polyethylene fatty acid ester and at least one polyethylene glycol aliphatic ester.

The question, therefore, is whether Applicants' invention is obvious over Burlew in view of Batton. Batton, as the Examiner indicates, teaches a combination of (1) sorbitan fatty acid ester and (2) polyoxyethylene derivative of a fatty acid ester. The Examiner admits that the polyoxyethylene derivative of a fatty acid ester of Batton is not the same as the polyethylene glycol ester used in Applicants' invention, but contends the use of the polyethylene glycol ester with the sorbitan fatty acid ester is suggested, because Burlew discloses both polyoxyethylene derivatives of a fatty acid ester and the polyethylene glycol esters.

Applicants submit that their invention is not obvious in view of the combination of Burlew and Batton. Burlew **requires** that both a polyoxyethylene derivative of a fatty acid ester and a polyethylene glycol ester be used in the composition, as well as other components. Because Burlew requires both the polyoxyethylene derivative of a fatty acid ester and the polyethylene glycol ester, they are obviously serving a different function and cannot be considered equivalents. Therefore, Applicants submit that it would not be obvious to one of ordinary skill in the art to substitute a polyethylene glycol ester for the polyoxyethylene derivative of a fatty acid ester of Batton.

## CONCLUSION

In view of the teachings of Burlew and Batton, Applicants submit their invention is not obvious. Applicants submit that the application is now in condition for allowance and respectfully request a notice to this effect. If the Examiner believes further explanation of Applicants' position is needed, Applicants' attorney will discuss this matter over the telephone or visit the Examiner personally if this may be useful.

Respectfully submitted,



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